

**REMARKS****Specification Amendment**

The Examiner requested that the names of the Inventors and the Assignee, appearing on page 1, lines 1-12, be removed from the specification; the Examiner also objected to the specification because some of the information about a related application is missing, at page 7, lines 8-11. Accordingly, we have amended the specification by removing both sections.

**Claim Status**

Claims 1-38 are pending in the application. Claims 18, 25, and 27 have been amended.

**Rejections Under Sections 112 and 101**

The Office Action rejected claims 19-21 and 23-35 under 35 U.S.C. § 112, second paragraph. According to the Office Action, apparatus recitations within these claims render the claims indefinite. Similarly, claims 21 and 23-35 were rejected under 35 U.S.C. § 101 as non-statutory, because “the claims appear to recite both method steps and apparatus limitations.” We respectfully traverse these rejections.

As the Office Action correctly points out, a claim that purports to be directed to both machine and process can be both non-statutory and ambiguous, because it does not point out and distinctly claim subject matter of the invention. In the present application, the claims in issue are not directed to both machine and process. Each of the claims starts with “A method.” Each of the

claims recites method steps, either directly or through inclusion of the limitations of a base and intervening claims. Not one of the claims in issue here is directed to both method and apparatus. The claims are directed only to methods. They are not ambiguous.

Furthermore, a claim complies with the second paragraph of section 112 when it recites “the patentable subject matter with a reasonable degree of particularity and distinctness.” MPEP §2173.02. The focus during examination should be on “whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available.” *Id.* We respectfully submit that the verbiage of claim 19 and other method claims in the application meets the threshold requirements of clarity and precision.

Similarly, the claims are directed to statutory subject matter, because they are directed to methods, *i.e.*, processes, and therefore fall within one of the statutorily defined categories of patentable subject matter. 35 U.S.C. § 101.

Some or possibly all of these claims include apparatus-related recitations, but these recitations are proper. For example, as noted in the Office Action, claim 19 recites that “each station has a dedicated track which it can use to send information to other stations.” This recitation within a “wherein” clause does not change the fact that claim 19 is directed to a “method for communicating on a chip,” as is recited in the claim’s preamble. The “wherein” clause simply provides a context for the operation of the claimed method. Context provided by apparatus recitations may or may not be limiting, depending on the claim, but it certainly does not change the fact that the claim as a whole is directed to a method, *i.e.*, to patentable subject matter.

Indeed, apparatus limitations are quite common in method claims. As one treatise makes clear,

Of necessity, there will be product or apparatus limitations in a method claim. The method is usually performed upon or acts in conjunction with the product or apparatus. This is analogous to the functions performed by the various elements of an apparatus . . . which frequently appear in a product or apparatus claim.

ROBERT C. FABER, LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING § 41 (Practicing Law Institute, 4<sup>th</sup> ed., 1997). Although it has been held that the patentability of a method claim cannot be premised *solely* on the structure of a mechanism used in practicing the method, apparatus limitations are not *per se* objectionable and are permissible in a method claim. *See Ex parte Damers*, 155 U.S.P.Q. 284 (Bd. App., 1961).

We respectfully submit that method claims 19-21 and 23-35 meet the requirements of both section 101 and section 112.

#### Novelty

The Office Action rejected all claims of the application under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Number 6,460,174 to Carey (“Carey”) and U.S. Patent Application Serial Number 10/086,953 by Apostol Jr. *et al.* (“Apostol”). We respectfully traverse these rejections.

Claim 1, as amended, recites the limitation that “each station has a dedicated track which it can use to send information to other stations.” Remaining independent claims, *i.e.*, claims 19 and 38 include similar or identical limitations. The Office Action cited Carey, at col. 2, lines 29-30, as disclosing this limitation. Carey indeed uses the word “dedicated” to describe connections: “The

distributed routing network 4 can be a series of dedicated connections, one or more shared connections or a mixture of dedicated and shared connections. One example of a shared connection is a bus.” Carey, col. 2, lines 28-32. Carey also shows modules 6 connected to the distributed routing network 4. Carey, Figure 1. But even if Carey’s modules 6 are similar to stations as defined in the present application – and we by no means admit this – Carey apparently does not teach that each module has a dedicated track within the routing network 4. Presence of dedicated connections by itself does not require each module to have a dedicated track. For this reason, the quoted text does not anticipate claims 1, 19, and 38.

Claims 3 and 21 recite that the on-chip components include a PCI bridge, a USB component, or an inter-integrated-circuit component. According to one definition, an inter-integrated-circuit or I2C is

a type of bus designed by Philips Semiconductors in the early 1980s, which is used to connect integrated circuits (ICs). I2C is a multi-master bus, which means that multiple chips can be connected to the same bus and each one can act as a master by initiating a data transfer. I2C is used in many devices, especially video devices such as computer monitors, televisions and VCRs.

Webopodia computer dictionary, available at <http://www.webopedia.com> (internal underlining and italicizing omitted).

The Office action states that Carey teaches an inter-integrated-circuit component at col. 2, lines 36-39. The text in question reads thus: “The modules can be of any form. For example the modules may include one or more of the following modules: CPU; external memory interface; debug module; external interface circuitry; and the like.” Carey, col. 2, lines 36-39. Although the cited

portion does not affirmatively exclude the use of an inter-integrated-circuit component, it apparently does not disclose its use.

According to claim 4, each station includes “an arbiter that . . . selects a track on which to receive incoming data.” The Office Action cites Carey at col. 2, lines 52-57 for this limitation. The cited text, however, describes that the “central control logic arbitrates between the requests of the initiator ports 8 to determine which one or more requests are allowed onto the distributed routing network.” Carey, col. 2, lines 52-54. Note that the central control logic is depicted as separate from the modules 6. Carey, Figure 1. Thus, Carey apparently does not disclose a station or a module that includes an arbiter that selects a track.

Claims 15 and 34 recite that more than one component is coupled to the communication bus through one station. The arrangement is illustrated in Figure 6 of the present application. The Office Action states that this limitation is also described in Carey, at col. 2, lines 36-39. But the cited text, already quoted above, merely states that modules can be of any form. It does not teach that multiple components are connected to the bus using the same station, *i.e.*, using the same port to the bus,<sup>1</sup> or even the same module.

Claims 17 and 36 recite that the station uses of a watchdog circuit that determines if the station has gone offline. Claims 18 (as amended) and 37 recite, in addition, that the watchdog circuit informs a controller connected to the system when the station goes offline. The Office Action cites Carey at col. 5, lines 56-58 for these limitations. The cited text reads as follows: “In other words,

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<sup>1</sup> The present application defines a station as a “port to an on-chip communication bus,” at page 8, line 7.

each request from the initiator port is delayed by one cycle before it is presented to the arbiter 38.” In contrast, watchdog circuit or timer is commonly understood to perform “a specific operation after a certain period of time if something goes wrong with an electronic system and the system does not recover on its own.” Techtarget Dictionary, available at <http://whatis.techtarget.com>. Carey does not teach the use of a watchdog timer in the cited text or, it appears, elsewhere.

The Office Action further rejected all claims of the application as anticipated by Apostol. Apostol was filed on February 28, 2002, after the filing date of the instant application. Apostol claims priority of U.S. Provisional Patent Application Ser. No. 60/272,439, which was filed on 2/28/2001. This claim of priority appears to be improper.

Apostol names three inventors in the non-provisional application: (1) Apostol, George JR.; (2) Kolluru, Mahadev S.; and (3) Vu, Tom. The provisional application relied by Apostol for the priority claim names one inventor, Torre Kellgren. Thus, none of Apostol’s inventors is named in the provisional application.

“An application for patent filed under section 111(a) or section 363 of [title 35 of United States Code] for an invention disclosed . . . in a provisional application filed under section 111(b) of [title 35], by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application.” 35 U.S.C. § 119(e)(1) (emphasis added). See also MPEP § 201.11(D) (One of the continuity conditions is that “[t]he later-filed application must be filed by an inventor or inventors named in the previously filed

application.”) As discussed above, Apostol’s inventors are not named in the provisional application relied on for Apostol’s priority date. Therefore, Apostol’s priority claim is improper.

If a published patent application does not claim priority of a foreign application, its 102(e) date is the earliest effective U.S. filing date. See, for example, MPEP § 706.02(f)(1)(I)(B) (“The 35 U.S.C. 102(e) date of a reference that did not result from, nor claimed the benefit of, an international application is its earliest effective U.S. filing date, taking into consideration any proper benefit claims to prior U.S. applications.”) See also MPEP § 706.02(f)(1)(II), Example 2; and MPEP § 706.02(f)(1)(III) (“No IA involved” box).

Here, Apostol’s claim of priority appears to be improper. Apostol’s earliest effective U.S. filing date is therefore its actual U.S. filing date, to wit February 28, 2002. Because this date is later than the filing date of the instant application, Apostol does not anticipate the claims of the instant application.

The above discussion addresses all independent claims and several dependent claims. As regards the dependent claims not specifically discussed, these claims are patentable together with their base claims and intervening claims, if any.

CONCLUSION

For the foregoing reasons, Applicants respectfully submit that all pending claims are directed to patentable subject matter, meet the definiteness requirement of 35 U.S.C. § 112, second paragraph, and are patentable over Carey and Apostol. To discuss any matter pertaining to the present application, the Examiner is invited to call the undersigned attorney at (858) 720-9431.

Having made an effort to bring the application in condition for allowance, a timely notice to this effect is earnestly solicited.

Respectfully submitted,

Dated: April 9, 2004

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